

In the Claims:

Please amend claims 1 and 3-6, and cancel claim 2, without prejudice, as follows:

1. (Currently amended) A magnetic head, comprising:

a magneto-resistive film having a ferromagnetic free layer at a top part thereof, said ferromagnetic free layer changing a magnetization thereof in response to an external magnetic field;

first and second magnetic domain control patterns provided on said ferromagnetic free layer, each of said first and second magnetic domain control patterns causing a pinning of magnetization in said ferromagnetic free layer in the vicinity thereof;

a first electrode provided on said ferromagnetic free layer in contact therewith at a region located between said first and second magnetic domain control patterns; and

a second electrode provided in electrical contact with a bottom surface of said magneto-resistive film,

said magnetic head being a CPP type magnetic head,

said magnetic head further comprising a first insulating film covering said first magnetic domain control pattern and a second insulating film covering said second magnetic domain control pattern, said first insulating film being interposed between said first magnetic domain control pattern and said first electrode on a top surface of said magneto-resistive

film, and said second insulating film being interposed between said second magnetic domain control pattern and said first electrode on the top surface of said magneto-resistive film.

2. (Cancelled)

3. (Currently Amended) A magnetic head as claimed in claim 21, wherein said first and second insulating films have a generally identical thickness.

4. (Currently Amended) A magnetic head, comprising:  
a magneto-resistive film;  
a pair of magnetic domain control patterns provided at both lateral sides edges of said magneto-resistive film, each of said magnetic domain control patterns causing a pinning of magnetization in said magneto-resistive film in the vicinity thereof, each of said magnetic domain control patterns being defined by an outer edge;

a pair of electrodes provided respectively on said pair of magnetic domain control regions with a mutual separation from each other, each electrode having a tip-end part extending over said magneto-resistive film toward the other electrode, each of said electrodes being defined by an outer edge aligned with a corresponding outer edge of a corresponding magnetic domain control pattern underlying said electrode.

wherein each tip-end part extends beyond said domain control region, on which said electrode having said tip-end part is provided, with a protruding distance of 0.25  $\mu\text{m}$  or less.

5. (Currently amended) A magnetic disk apparatus, comprising:  
a rotary magnetic disk; and  
a magnetic head scanning over a surface of said magnetic disk,  
said magnetic head comprising:  
a magneto-resistive film having a ferromagnetic free layer at a top part thereof,  
said ferromagnetic free layer changing a magnetization thereof in response to an external magnetic field;  
first and second magnetic domain control patterns provided on said ferromagnetic free layer, each of said first and second magnetic domain control patterns causing a pinning of magnetization in said ferromagnetic free layer in the vicinity thereof;  
a first electrode provided on said ferromagnetic free layer in contact therewith at a region located between said first and second magnetic domain control patterns; and  
a second electrode provided in electrical contact with a bottom surface of said magneto-resistive film,  
said magnetic head being a CPP type magnetic head,  
said magnetic head further comprising a first insulating film covering said first magnetic domain control pattern and a second insulating film covering said second magnetic

domain control pattern, said first insulating film being interposed between said first magnetic domain control pattern and said first electrode on a top surface of said magneto-resistive film, and said second insulating film being interposed between said second magnetic domain control pattern and said first electrode on the top surface of said magneto-resistive film.

6. (Currently Amended) A magnetic disk apparatus, comprising:

a rotary magnetic disk; and

a magnetic head scanning over a surface of said magnetic disk,

said magnetic head comprising:

a magneto-resistive film;

a pair of magnetic domain control patterns provided at both lateral ~~sides~~edges of said magneto-resistive film, each of said magnetic domain control patterns causing a pinning of magnetization in said magneto-resistive film in the vicinity thereof, each of said magnetic domain control patterns being defined by an outer edge;

a pair of electrodes provided respectively on said pair of magnetic domain control regions with a mutual separation from each other, each electrode having a tip-end part extending over said magneto-resistive film toward the other electrode, each of said electrodes being defined by an outer edge aligned with a corresponding outer edge of a corresponding magnetic domain control pattern underlying said electrode,

wherein each tip-end part extends beyond said domain control region, on which said electrode having said tip-end part is provided, with a protruding distance of 0.25  $\mu\text{m}$  or less.

7-9. (Cancelled)